HuddleCamHD
USB 3.0 HD Camera

HUDDLECAM-HD 10X USB 3.0 PTZ CONFERENCE CAMERA USER MANUAL

V 2.3(ENGLISH VERSION)

Please read this Manual before set up Camera,
and stick to its requirements strictly for Safety reason.
Suggest you save this manual for further inquires reference.

Content

Precautions 3
- Safety Tips 3
- Supplied Accessories 3
- Main Features 4
  - Camera and Lens 4
  - Pan/Tilt Movement 4
  - Rear board connectors 4
  - Electrical Index 4
  - Structure 4
- Rear Board & function 5
  - Rear board of camera 5
  - VISCA RS-232C IN Reference 5
  - VISCA Out Reference 6
- Cable Connection info 6
  - Camera to PC connection 6
  - Camera Cascade 7
- OSD Menu 7
  - Self-testing OSD Menu 7
  - Dome OSD 8

OSD Menu 8
- LENS OSD 9
- Dip-switch settings 9
  - Dip-switch over view image 9
  - Address code assignment 10
  - Firmware upgrading Switch 10
  - Baud rate, communication protocol Assignment 10
  - IR Remote control receiving settings 10
  - IR Remote control Output settings 10
- IR Remote Controller 11

Operation instruction 13
- Joy-stick PTZ Keybaord operation 13
- Special Preset positions function 14

Specification sheet 15

Installation instruction 17
- Wall/Ceiling installation 17

Tripod Installation 18

Compatibility 19

Troubleshooting 19

Precautions

Safety Tips

- Please read this manual carefully before use the Camera.
- To avoid damage from stress, violent vibration, soaking during transportation, storage and installation.
- Take care of each components of Camera during installation, and install camera at where is affordable enough, to avoid drop or scratches of camera case.
- Do not apply excessive voltage. (Use only the specified voltage.) Otherwise, you may get an electric shock or a fire may occur.
- Keep the transmission of RS-485, Video signal away from powerful electromagnetic radiation resources.
- Do not shoot images that are extremely bright (e.g., light sources, the sun, etc.) for long periods of time. Do not use or store the camera in the specified extreme conditions. (Please refer to specification sheet of camera.)
- Do not clean camera with active chemical or corrosive detergents, and remove dust or dirt on the surface of the lens with a blower (Commercially available)
- Do not disassemble any camera components, in case of abnormal operation; contact your authorized dealer or the store where you purchased the product.
- After long time operation, these components may get machine wear like motor, slip ring, you can contact for repair or change, the local dealer or the shop where you bought this camera.

Accessories

1. 1 x 10x Zoom USB 3.0 HD Video Conference Camera;
2. 1 x Power Adaptor;
3. 1 x Remote Controller;
4. 1 x Control Cable;
5. 1 x 3M USB 3.0 Cable, RS-232c to RS-485 cable;
6. 1 x CD User Manual;
7. 1 x Guarantee Card;
8. 1 x Qualified Certificate Card.

Main Features

Camera and Lens

Video CMOS Sensor: 1/2.5 inch super quality HD CMOS transducer
Image: 16:9 2.1 Mega pixel
Video Format:YUY2|1920x1080P/30, 1280x720/60
Lens zoom: 10x optical zoom, f=4.5-45mm F1.8-2.2 Focus, 1.0Lux at F 1.8
Visual Angle: 5.4°(farness) -52°(nearness)
Minimum Illumination: 10LUX
White Balance: Auto/Sunlight/Cloudiness/Shade/fluorescence white balance mode
Focus: Auto/Manual
Iris: Auto/Manual
Electronic Shutter: Auto
Black light compensation: Auto
S/N Ratio: 50dB

Pan/Tilt Movement

Pan Rotation: 355 degree
Tilt Rotation:90 degree
Built in Pan/Tilt Motor: Pan speed: 0- 280°/sec Tilt speed: 1°-100°/sec
Preset Speed: Pan running: 120°/sec Tilt running: 100°/sec
Preset: 9 preset position set by remote Control, 255 preset position set by Keyboard Controller, 4 Patrol lines

Rear board connectors

High Definition Interface: USB 3.0
Controller Signal Interface: 8 leads mini DIN (VISCA IN, VISCA OUT/RS485)
Controller Signal Interface: Dip-switch Pin 7/TTL Signal; Baud Ratio: 9600bps
Power supply interface: DC 12V Socket

Electrical Index

Power supply adapter: 12V DC/2A
Input voltage: 12V DC(10.5-14V DC)
Input power: 24W(MAX)

Structure

Material: All-alloy, PC plastic
Dimension (Width x highness x depth): 124x120x145mm / 220x175x220mm (NET/PACKAGE)
Working environment: Indoor
Temperature: -0℃ to +45℃
Storage temperature: -10℃ to +60℃
Color: Silver Gray

Rear Board & function

Rear board of camera

Front of HD Camera

1 **USB 3.0 interface**

USB 3.0 high speed transfer interface

2 **IR Receiver of R/C Signal**

To receive IR remote controller signal Sensor

3 **VISCA RS232C IN Connector**

When connect multi cameras to PC via RS-232C (VISCA IN), use serial cable connect VISCA OUT of the first camera to VISCA IN of the second camera.

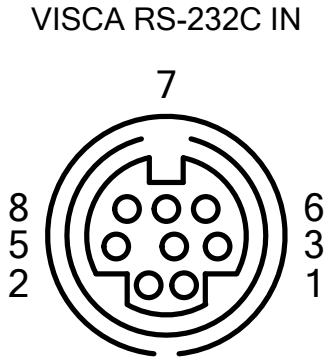
4 **VISCA Out/RS-485 Control Interface**

Used for connect Chain Daisy of cameras, or RS485 Control.

5 **DC12V 1.2A Power supply socket**

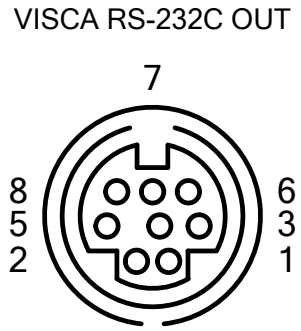
Power on/off

VISCA RS-232C IN Reference



Pin S/N	Function
1	DTR IN
2	DSR IN
3	TXD IN
4	GND
5	RXD IN
6	GND
7	IR Commander Signal OUTPUT
8	NO Connection

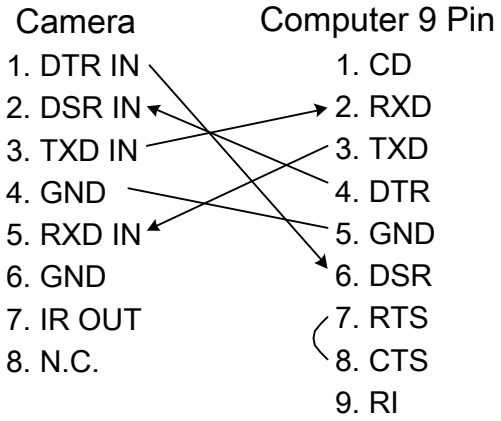
VISCA Out Reference

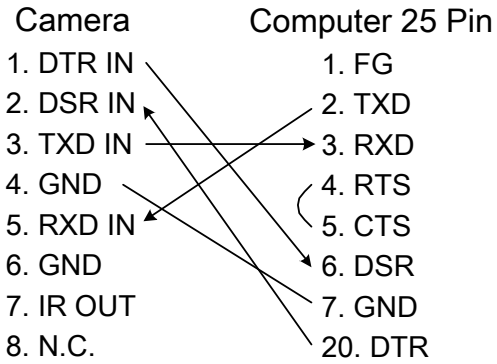


Pin S/N	Function
1	DTR OUT
2	DSR OUT
3	TXD OUT
4	GND
5	RXD OUT
6	GND
7	RS-485－
8	RS-485＋

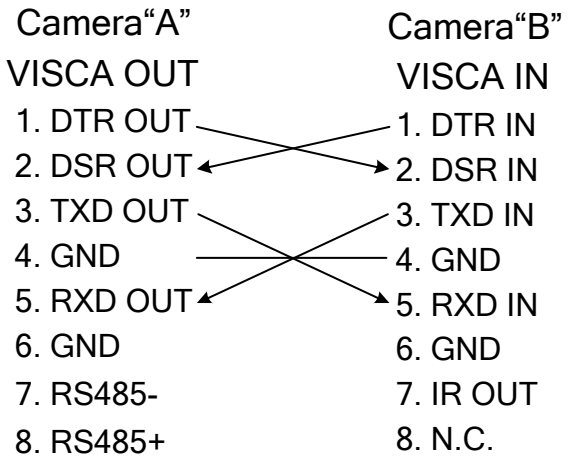
Cable Connection info

Camera to PC connection





Camera Cascade



OSD Menu

Access OSD menu to understand the features of camera and change the settings.

Note: *Camera can’t move pan/tilt when OSD menu is displaying on screen.*

Self-testing OSD Menu

There are OSD menu as following when camera start on, and it will be disappear after self-testing completed.
Following is the parameter of camera, and different camera module adopted display different OSD menu parameters.

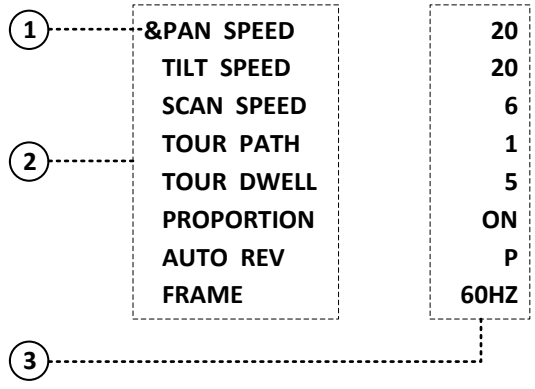
INFORMATION

ADDRESS	**1**
BUADRATE	**9600**
PROTOCOL	**VISCA**
CONTROL	**RS-232C**
LENSTYPE	**SONY**
DOMETYPE	
VENDER	
VERSION	**2.3.4.4**

- ADDRESS (Camera address)
- BUADRATE (Camera baud rate)
- PROTOCOL (PTZ Control Protocol)
- CONTROL (Camera control type)
- LENSTYPE (Camera module adopted)
- DOMETYPE (Camera model No.)
- VENDOR (Manufacturer name)
- VERSION (Initial Factory version)

Dome OSD

Press "***DOME OSD***" button on remote controller to display:



① Pin
Chose OSD menu
Move by ↑ or ↓ key

② Parameters
Chose by ↑ or ↓ key

③ Values
Display OSD parameters, chose by ← or → to change the parameters value of menu.

OSD Menu

OSD Menu Parameters:

- PAN SPEED Default value: 30
  Adjustable pan movement speed scope 1~63
- TILT SPEED Default value: 30
  Adjustable tile movement speed scope 1~63
- SCAN SPEED Default value: 6
  Adjustable pan movement speed scope 1~63
- TOUR PATH Default value: 1
  Optional tour path at 1~4
- TOUR DWELL(Tour duration time) Default value: 5
  Tour duration is 1~60 seconds
- PROPORTION (Speed matching) Default value: ON
  ON means enable speed match function, OFF means not.
- AUTO REV Default value: P
  Image auto flip(positive)/N(upside down)/OFF
- FRAME Default value: 60HZ
  Support 60Hz & 50Hz for optional

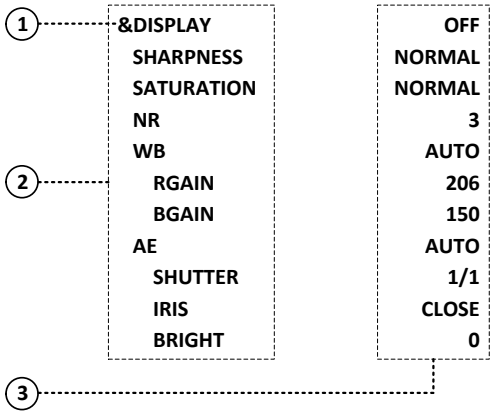
Note:

60Hz mode, **camera output *1080p30* as default, support 1080p@30/25/20/15/10/5, 720p, 800x600, 640x480/60/50/30/25/20/15/10/5;**

50Hz mode, **camera output *1080p@25* as default, support 1080p@25/20/15/10/5, 720p, 800x600, 640x480/50/25/20/15/10/5;**

LENS OSD

Access ***LENS OSD*** from remote controller, there is OSD menu display on screen and its possible to adjust or change any settings of lens OSD. (Up/down direction key to change the menu, left/right direction key to change the parameters value)



Lens OSD menu function

Camera settings below:

- **DISPLAY** Default value: OFF
  SUPPORT ON/OFF
- **SHARPNESS** Default value: NORMAL
  LOW/HIGH
- **SATURATION** Default value: NORMAL
  LOW/HIGH
- **NR** (Noise Reduction) Default value: 3
  Adjustable Value 0~5
- **WB** (White Balance) Default value: Auto
  AUTO/MANUAL/OUTDOOR/INDOOR/ONE PUSH/ATW
- **R GAIN** (RED RAIN) Default value: 206
  Adjustable scope: 0~255
- **B GAIN** (Blue Gain) Default value: 150
  Adjustable scope 0~255
- **AE** (Auto Exposure) Default value: Auto
  AUTO/MANUAL/SHUTTER/IRIS/BRIGHT
- **SHUTTER** SPEED Default value: 1/1
  Shutter speed range: 1/1—1/10000
- **IRIS** Default value: Close
  Close/F1.4-F22
- **BRIGHT** Default value: 0
  0 ~ 31

Note:

Shutter, IRIS, BRIGHT only adjustable while AE value set as MANUAL mode.

Dip-switch settings

Dip-switch over view image

底部拨码开关视图

Address code assignment

Address Code	SW 1 dip-switch info						
	DIP-1	DIP-2	DIP-3	DIP-4	DIP-5	DIP-6	DIP-7
1	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	**ON**	OFF	OFF	OFF	OFF	OFF
3	OFF	OFF	**ON**	OFF	OFF	OFF	OFF
4	OFF	OFF	OFF	**ON**	OFF	OFF	OFF
5	OFF	OFF	OFF	OFF	**ON**	OFF	OFF
6	OFF	OFF	OFF	OFF	OFF	**ON**	OFF
7	OFF	OFF	OFF	OFF	OFF	OFF	**ON**

Firmware upgrading Switch

Set SW1/DIP-8 as ON for firmware software upgrading, and set OFF for nomal working, must set DIP-8 off for usual working.

Baud rate, communication protocol Assignment

Baud rate	SW 2 DIP-1	Communication	SW 2 DIP-2	Protocol	SW 2 DIP-3
38400bps	ON	RS-485	ON	PELCO-D	ON
9600bps	OFF	RS-232	OFF	VISCA	OFF

IR Remote control receiving settings

R/C Address	SW 2 Dip-switch status (Pin 4, Pin 5)	
	DIP-4	DIP-5
default	OFF	OFF
1	OFF	ON
2	ON	OFF
3	ON	ON

IR Remote control Output settings

Dip-6 set as “on”, to send signal from Remote controller, and receiving from VISCA IN interface, set OFF as closed;

Note: Power-off before to set different dip-switch settings, or inactive of settings with Camera power-on adjustments;

IR Remote Controller

Front Panel:

1. Reset:

Restart Camera and restore to factory default settings

2. Camera Selection

Select Camera of IR 1,2,3

3. Preset positions

1-9: preset positions

Set: Setting preset position

Clear: Clear preset position

Call: Call preset position

Note: if you need set number 1 preset position, you should press Number key "1", then press "Set" to setting this position;

4. Zoom in/out Control Zone

+: Zoom in
-: Zoom out

5. Pan/tilt Control

: move up
: move down
: move left
: move right
: auto Pan moving

6. Additional Function zone

Freeze: image freeze
BL: Backlight compensation
WB: White Balance
AE: Auto Exposure
D zoom: Digital Zoom
HDMI: swap to HDMI Video output
DVI: Swap to DVI video output
Format: swap between different format

7. Power supply Switch

Switch of stand by and working status

8. OSD Menu Zone

Dome OSD: enter Camera OSD Menu
Lens OSD: enter Lens OSD Menu

9. Slow Zoom in/out Zone

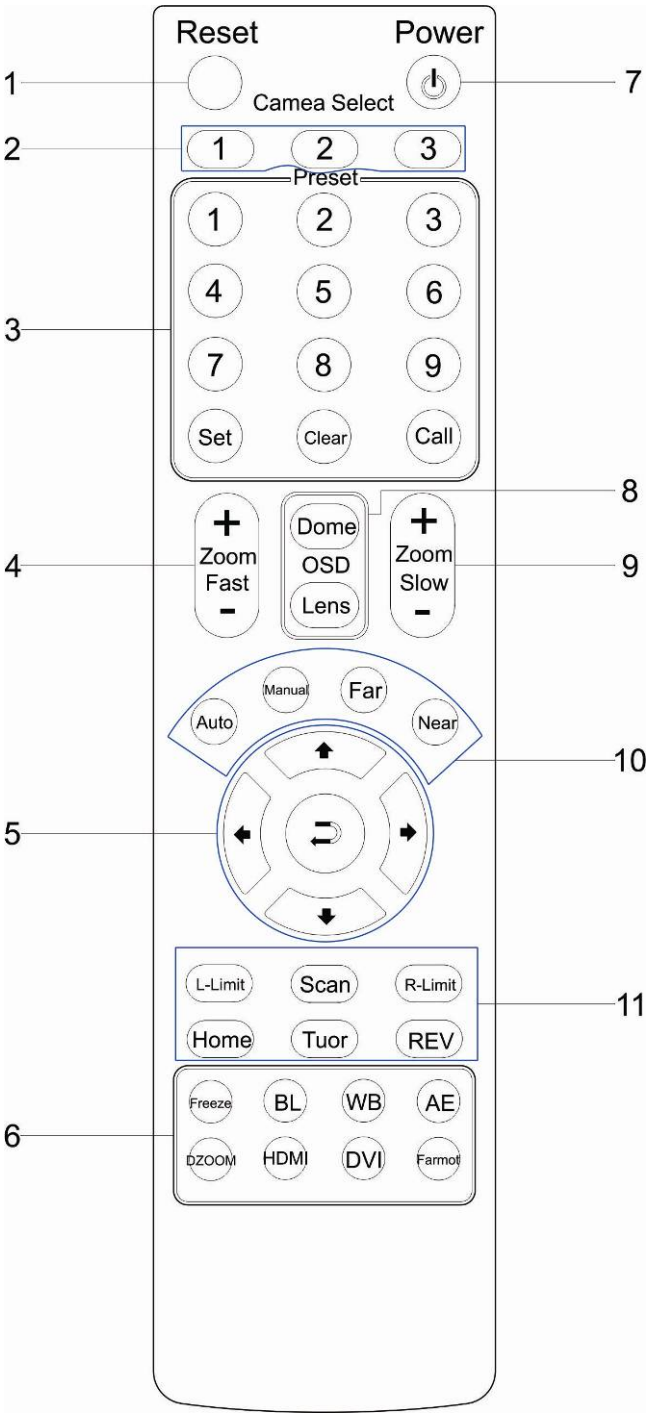
+: Zoom in slowly
-: Zoom out slowly

10. **Focus Control Zone**

Auto: auto focus of lens
Manual: manual focus of lens
Far: focus at far distance objects
Near: focus at near distance objects

11. Pan/Tilt Function Zone

L-Limit: Set Left limit Scanning position
Scan: Enable Boundary scanning
R-Limit: Set Right limit scanning position
Home: Camera Home position
Tour: Enable Patrolling
Rev: Image auto-flip



S/N	Regional	Keynote	functions
1	**Reset**		Restart Camera and back to default Factory settings.
2	**Camera ID Chose**		Chose camera according to your Remote control
3	**Preset position function area**		Chose serial no. of preset position
			To “Set” as preset position
			To “Clear” preset position
			To “Call” preset position
4	**Fast-speed Zoom in/out**		Zoom in of camera Lens
			Zoom out of camera lens
5	**Pan/Tilt control**		Move camera up-side
			Move camera down-side
			Move camera go left
			Move camera go right
			Enable Pan movement scanning
6	**Auxiliary**		Image Freeze
			Backlight compensation
			White Balance
			Auto Exposure
			Digital Zoom
			Swift as HDMI Video output (not available with this camera)
			Swift as DVI Video output (not available with this camera)
			Swipe different video formats (not available with this camera)

7	**Power on/off**		Power-on/off
8	**OSD Menu**		Login DOME OSD Menu
			Login Lens OSD Menu
9	**Slow speed Zoom in/out**		Zoom in slowly speed
			Zoom out slowly speed
10	**Lens Focus adjustments**		Auto focus automatically
			Manual focus
			Lens zoom in far end
			Lens zoom in Near end
11	**Pan & Tilt Function area**		Set Left points for boundary scanning
			Enable Scanning automatically
			Set Right limit point for Boundary scanning
			Home position of Camera
			Enable Touring
			Image Up-side down option

Operation instruction

Joy-stick PTZ Keyboard operation

To use joy-stick PTZ keyboard to control Camera including, pan/tilt/zoom movement, set Tour scanning, enable boundary scanning, etc.

option	function
turn up	Down-side movement
turn down	Up-side movement

turn left	Left movement
turn right	Right movement
Rotate left	Zoom in
Rotate right	Zoom out

Special Preset positions function

Preset position No.	Functions
76	Enable stand-by status
77	To display Self-testing menu on screen
90	Image up-side down
91	Login system OSD Menu
92	Set Left limit position of scanning
93	Set right limit position of scanning
94	Restart Camera and return default settings
95	Call Lens OSD Menu of Lens
96	Home position
97	Enable regional Pan scanning
98	Enable Tour scanning
99	Enable 360 degree Horizontal scanning

Specification sheet

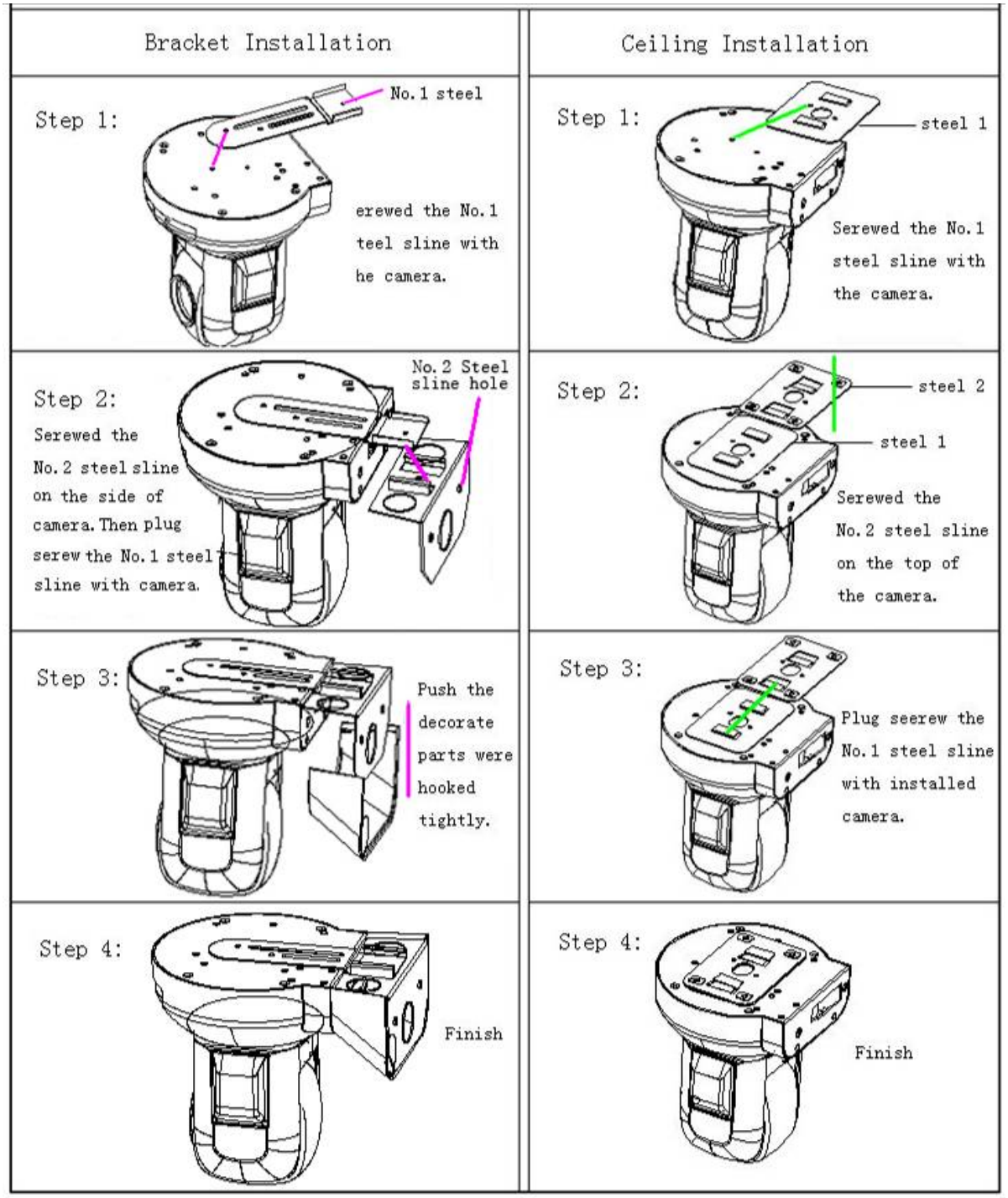
Model No.		DN-HDC08B-CN
Image Sensor	Sensor	1/3" CMOS 2.1 Mega Pixel
	Effective Pixels	2.1 Megapixel
	Minimum Scene Illumination	Color: 0.1Lux,Black/White: 0.01Lux
	White Balance	Auto/Manual
	Gain Control	Auto
	Back-light compensation	On / Off
	E-Shutter	1/30s~1/10000S
	S/N Ratio	> 50db
Lens	Focus	f=5-50mm
	Iris	Auto/Manual
	Zoom	10x Optical Zoom
View Angle		52°
Video Output		USB 3.0
Video Output Mode		Video Format:YUY2|1920x1080P/30, 1280x720/60
Communication Interface		RS-485,EIA/RS232C (Bidirectional)
Communication Control Protocol		PELCO-D,VISCA
Baud Rate		9600/38400bps
Tour		4 Line
Preset Position		64
LCD Display		Optional (Needs OEM)
Power on State		Auto Scan or tour
Speed Matching		Support
OSD Menu		To change parameters of camera or camera module from OSD Menu
Image Auto Flip		When tilt movement over 90 degree(Option)
Pan Speed		1-280 degree per second
Tilt Speed		1-100 degree per second

Pan Rotation Angle	0~355degree
Tilt Rotation Angle	90 degree
Auto Pan Scan	Support auto pan scan
Boundary Scan	0-359 degree (programmable)
Remote Controller	IR wireless control P/T/Z
Power Supply	DC12V±10%,1.2A
Working Temperature	0-60℃
Environment Humidity	0-95%RH

Installation instruction

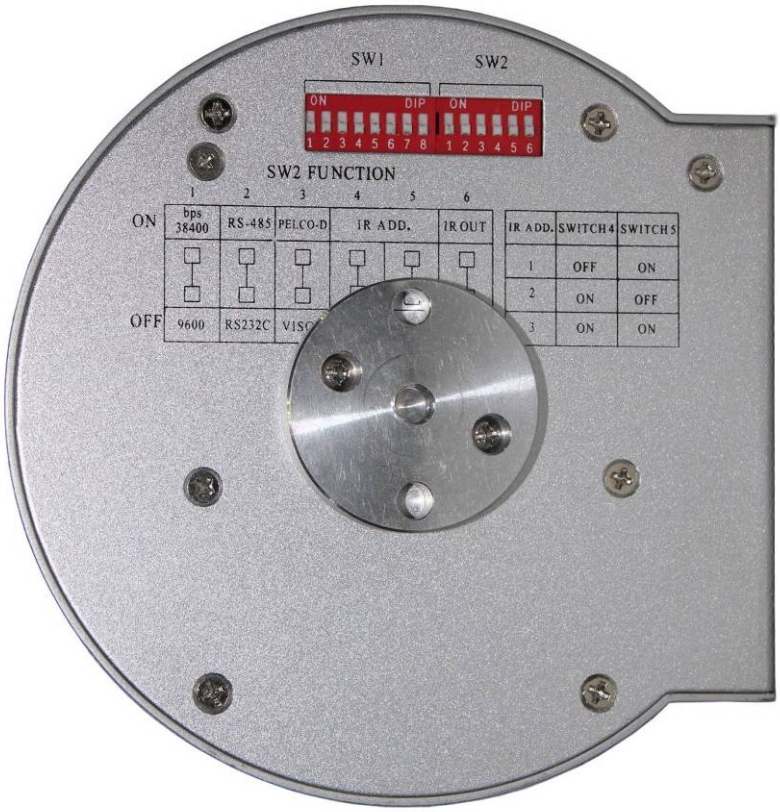
Wall/Ceiling installation

Mount kits provided with Camera in the package.

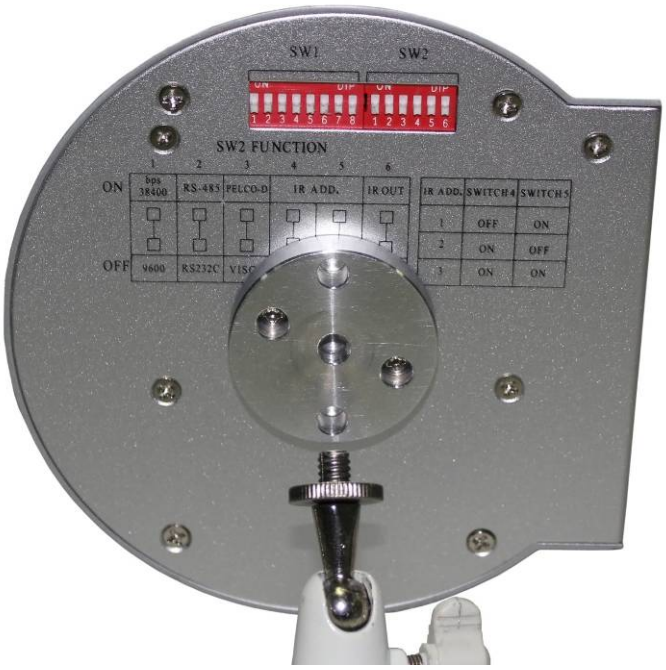

Bracket Installation
Ceiling Installation
Step 1:
No.1 steel
erewed the No.1 teel sline with he camera.
Step 1:
steel 1
Serewed the No.1 steel sline with the camera.
Step 2:
No.2 Steel sline hole
Serewed the No.2 steel sline on the side of camera. Then plug serew the No.1 steel sline with camera.
Step 2:
steel 2
steel 1
Serewed the No.2 steel sline on the top of the camera.
Step 3:
Push the decorate parts were hooked tightly.
Step 3:
Plug seerew the No.1 steel sline with installed camera.
Step 4:
Finish
Step 4:
Finish

Tripod Installation

To fix the round accessory on bottom board of camera, to match 2 screw position on the bottom board;



To match the Tripod on bottom of camera;



Compatibility

As we tested with Amcap S/W, Skype, Microsoft Lync, VSEE, Vidyo, DEBUT Software, most of them are Video Conferencing system application, and it works perfect;

Troubleshooting

Before request service to serviceman or manufacture, it can according to below methods to remove failures, if still can't be solved, please contact to distributor or manufacture for help.

Fault Phenomenon	**Reason**	**Solution**
There is no power to camera.	The power has been prevented between adaptor and AC or DC IN 12V has not been connected to camera.	Please check the connector between camera and power, fixed the power adaptor to camera.
	Power switch was set to OFF.	Please set power switch to ON.
The video of camera cannot be displayed on the screen.	Video cable is bad contact.	Check the connection between video cable, camera and monitor; fix the connector on each end.
	Exposure setting is not correct on camera.	Change it to right exposure settings.
It's unable to Pan, Tilt and zoom camera.	Menu was displayed on monitor.	Re-operate after exit menu.
	Pan and tilt range was limited.	
Remote control is not working.	The "camera select" button on the remote control is not match with "IR select" switch number.	Choose the correct "IR select" number to meets camera.
It was not been controlled via VISCA when camera connect to PC.	The connection between PC and camera is wrong.	Make sure it is a correct connection between camera and PC. (Reference to camera connection.)
The camera is not working completely.		Pull up the power, and wait a few minute to connect power again. Or power off the camera, then restart after a moment.